



# Ph.D. ADMISSION

## DEPARTMENT OF CHEMISTRY INDIAN INSTITUTE OF TECHNOLOGY INDORE

(April-June 2022 Advertisement)

Applications are invited from highly motivated applicants for admission to the Ph.D. program in the **Departments of Chemistry** (<https://chemistry.iiti.ac.in/>), Indian Institute of Technology Indore (IIT-Indore: <https://www.iiti.ac.in/>) for Autumn 2022.

### **Eligibility** (Minimum Educational Qualifications and Qualifying Examination):

- **For Indian applicants:** Master's degree in Chemistry or other fields relevant to Chemical Sciences (with first division as defined by the awarding Institute/University) AND valid **CSIR-JRF/UGC-JRF** OR **INSPIRE Fellowship** OR Equivalent Fellowship OR valid **GATE** qualification with good Rank/Score. Kindly refer to the main Ph.D. Advertisement of the Institute available at <https://academic.iiti.ac.in/phdadvt.php> for more details.
- **For International applicants:** Master's degree in Chemistry or other fields relevant to Chemical Sciences (with first division as defined by the awarding Institute/ University) AND Valid **TOEFL/IELTS** OR equivalent qualification.

**Categories of Admission:** **FA:** **CSIR-JRF/UGC-JRF** OR **INSPIRE Fellowship** OR Equivalent Fellowship Awardee. **TA:** Valid **GATE** qualification, **CT:** College Teacher, **SW:** Sponsored without Institute scholarship, **DF:** Defense Forces, **IS:** Institute Staff. For more details about admission category and eligibility, kindly refer to the main Ph.D. Advertisement of the Institute available at <https://academic.iiti.ac.in/phdadvt.php>.

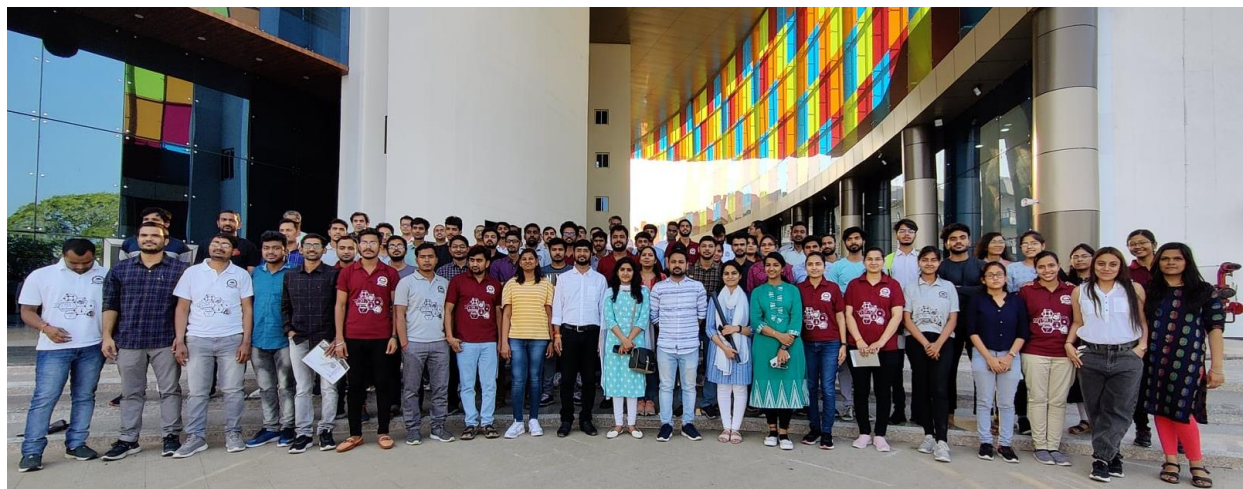
**Application Procedure:** Candidates must apply **ONLINE** through the institute website <https://academic.iiti.ac.in:8443/nregistration.jsp>. For Application Fee please refer the main PhD advertisement of the institute. <https://academic.iiti.ac.in/phdadvt.php>.

Candidates must arrange recommendation letters from at least two referees and should request the referees to send recommendation letters to [admission-chem@iiti.ac.in](mailto:admission-chem@iiti.ac.in) well before appearing for the interview.

Mere fulfillment of the essential qualifications does not guarantee admission in the Ph.D. program in the Department of Chemistry. The selection will be based on the overall performance, which may include an interview, academic background, suitability for research in the chosen field/area, research aptitude, communication skills, etc.

<b>Last Date of Online Application:</b>	<b>Extended till 12<sup>th</sup> June 2022</b> (till 5.00 pm)
<b>Tentative Dates of Interview:</b>	<b>13-14<sup>th</sup> June 2022</b>

Detailed schedule regarding the interview will be intimated to the shortlisted candidates after last date of application (**Note: Interviews will be in ONLINE mode**).



## Come, Live and Explore Chemistry at Department of Chemistry, IIT Indore!

The Department of Chemistry offers Doctor of Philosophy (PhD) degree in Chemistry, where students require completion of course work and a thesis defense on original research performed under the direct supervision of at least one faculty member from the Department of Chemistry.

Department of Chemistry offers a variety of cutting-edge research areas<sup>#</sup> under broad areas of:

- **Inorganic Chemistry**
- **Organic Chemistry**
- **Physical Chemistry**
- **Theoretical & Computational Chemistry.**

The Department of Chemistry at IIT Indore is very well equipped with research facilities and laboratories, along with a **Sophisticated Instrument Center (SIC)** (for more details please visit (<http://people.iiti.ac.in/~sic/>) state-of-art sophisticated instrumentation facilities to assist research in almost all areas of chemistry and interdisciplinary research.

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For further information contact: [admission-chem@iiti.ac.in](mailto:admission-chem@iiti.ac.in)  
(Chemistry Office Phone: 0731-660-3340/0731-660-3415)

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**Student's Life@IIT Indore:** IIT Indore is a residential campus, where most of our students are staying inside the campus. Institute is committed to provide all the basic infrastructure facilities to support our research students/staff to excel best output. Campus Hostels, several eating outlets, service providers are available to students. For more details please visit: (<https://iiti.ac.in/page/campus-facilities> and [www.iiti.ac.in](http://www.iiti.ac.in))



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<sup>#</sup>Candidates are strongly advised to visit the profiles of all the faculty members (<https://chemistry.iiti.ac.in/people/faculty/>) before applying for the Ph.D. program and are also encouraged to contact the interested faculty members to gain more information if required.

## # Details of the Faculty & Research at Department of Chemistry, IIT Indore

### INORGANIC CHEMISTRY

#### Prof. Suman Mukhopadhyay

**Research area:** Metal complexes in therapeutics and drug delivery, nanostructured metallogel, molecular recognition, metalloenzymes, and porous materials.

**Group website:** <https://suman729.wixsite.com/mysite>

**Email:** [suman@iiti.ac.in](mailto:suman@iiti.ac.in)

#### Dr. Shaikh M. Mobin

**Research area:** Inorganic complexes, MOF & COF for energy storage, conversion, & generation, Crystal engineering, Applications in catalysis, bioimaging & sensing.

**Group website:** <https://iiti.ac.in/people/~xray/index.html>

**Email:** [xray@iiti.ac.in](mailto:xray@iiti.ac.in)

#### Prof. Sanjay Kumar Singh

**Research area:** Catalyst design & synthesis for H<sub>2</sub> production & storage, biomass transformation, organic transformations, CO<sub>2</sub> capture & utilization.

**Group website:** <https://iiti.ac.in/people/~sksingh/>

**Email:** [sksingh@iiti.ac.in](mailto:sksingh@iiti.ac.in)

#### Dr. Amrendra Kumar Singh

**Research area:** Ligand design in metal catalysis, Multidentate N-heterocyclic carbene ligands, Small molecule activation by transition metal complexes, Metal-ligand multiple bonds.

**Group website:** <http://people.iiti.ac.in/~aks/>

**Email:** [aks@iiti.ac.in](mailto:aks@iiti.ac.in)

#### Dr. Abhinav Raghuvanshi

**Research area:** Luminescent complexes of late transition metals and applications, Inorganic & organometallic TADF materials and inorganic conducting materials.

**Group website:** <https://rabhinav9.wixsite.com/inorgmatlab>

**Email:** [r.abhinav@iiti.ac.in](mailto:r.abhinav@iiti.ac.in)

#### Dr. Dipak Kumar Roy

**Research area:** Low-valent s- and p-block compounds and small molecule activation, Multiple bonded main group compounds, Organic-Inorganic hybrid polymers.

**Group website:** <http://people.iiti.ac.in/~dipak.roy/>

**Email:** [dipak.roy@iiti.ac.in](mailto:dipak.roy@iiti.ac.in)

### ORGANIC CHEMISTRY

#### Prof. Rajneesh Misra

**Research area:** Organic pi conjugated molecular systems, Organic Synthesis, organic/inorganic and organometallic materials for photonics & electronics.

**Group website:** <https://rajneeshmisraiiti.wixsite.com/rajneeshmisra>

**Email:** [rajneeshmisra@iiti.ac.in](mailto:rajneeshmisra@iiti.ac.in)

#### Prof. Apurba K. Das

**Research area:** Organic synthesis, Bio-organic chemistry, Supramolecular chemistry.

**Group website:** <http://people.iiti.ac.in/~apurba/daslab.htm>

**Email:** [apurba.das@iiti.ac.in](mailto:apurba.das@iiti.ac.in)

#### Prof. Sampak Samanta

**Research area:** Asymmetric synthesis, Metal mediated synthetic transformation, Green chemistry, Total synthesis of biologically active compounds.

**Group website:** <https://www.iiti.ac.in/people/~sampaks/>

**Email:** [sampaks@iiti.ac.in](mailto:sampaks@iiti.ac.in)

#### Dr. Chelvam Venkatesh

**Research area:** Natural products, Heterocycles & carbocycles, Diagnostic applications of targeting ligands for cancers & inflammatory diseases, Drug-delivery, NIR, Medicinal chemistry

**Group website:** <https://iiti.ac.in/people/~cvenkat/>

**Email:** [cvenkat@iiti.ac.in](mailto:cvenkat@iiti.ac.in)

#### Dr. Selvakumar Sermadurai

**Research area:** Photo-redox catalysis, Asymmetric synthesis, Synthesis of biologically active natural products, Green chemistry.

**Group website:** <https://sites.google.com/view/selvargp/home>

**Email:** [selva@iiti.ac.in](mailto:selva@iiti.ac.in)

#### Dr. Umesh A. Kshirsagar

**Research area:** Transition metal catalysis and Photo-redox catalysis for Organic Synthesis, C-H Activation and Oxidative coupling, Cross Dehydrogenative coupling, Green chemistry.

**Group website:** <https://uakshirsagar.wixsite.com/synchem>

**Email:** [uakshirsagar@iiti.ac.in](mailto:uakshirsagar@iiti.ac.in)

### PHYSICAL CHEMISTRY

#### Dr. Anjan Chakraborty

**Research area:** Study of bio-nano interface by spectroscopic and imaging techniques.

**Group website:** <https://anjanachakrabortyii.wixsite.com/anjanciiti>

**Email:** [anjanc@iiti.ac.in](mailto:anjanc@iiti.ac.in)

#### Dr. Tushar K. Mukherjee

**Research area:** Photoluminescence spectroscopy, Fluorescence imaging.

**Group website:** <https://kantitushar2.wixsite.com/tushar>

**Email:** [tusharm@iiti.ac.in](mailto:tusharm@iiti.ac.in)

#### Dr. Tridib Kumar Sarma

**Research area:** Nanostructured materials, Polymer composites, Biomimetic materials chemistry.

**Group website:** <https://tridibsarma.wixsite.com/college-sorority-1>

**Email:** [tridib@iiti.ac.in](mailto:tridib@iiti.ac.in)

### THEORETICAL & COMPUTATIONAL CHEMISTRY

#### Prof. Biswarup Pathak

**Research area:** Machine learning, Nanoclusters for Catalysis, Fuel/Solar Cell, Battery, and Molecular electronics.

**Group website:** <https://iiti.ac.in/people/~biswarup/>

**Email:** [biswarup@iiti.ac.in](mailto:biswarup@iiti.ac.in)

#### Dr. Satya S. Bulusu

**Research area:** Computational chemistry, Structural evolution of nanoclusters and nanoalloys, AI and Machine learning in Chemistry, Algorithms and parallel computing.

**Group website:** <https://iiti.ac.in/people/~sbulusu/>

**Email:** [sbulusu@iiti.ac.in](mailto:sbulusu@iiti.ac.in)